UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 09/14/2009 have been fully considered but they are not persuasive.

On page 15, Applicant argues that none of the applied art discloses or suggests the clarified claim feature of "the allowable range of the inter-layer jump being no more than 40,000 sectors".

In response, Examiner respectfully disagrees since at least in paragraphs [0094], [0099]-[0100], [0102], and further illustrated in Fig. 9, Ueki clearly discloses, depending on picture quality, required data rates comprise 2 Mbps, 4 Mbps, or 8 Mbps. Among these rates, 2 Mbps allows largest allowable jump range. With 0.7 seconds of allowable inter-layer seek time as disclosed at least in paragraph [0100], the jump range for 2 Mbps data rate requires 1.4 Mb, which is less than 0.2 MB, which is less than 205KB, which is less than 103 sectors (each sector comprises 2 KB of data – see Okada at Fig. 1 and column 20, lines 55-65).

On pages 15-16, Applicant argues that the limitation of "determining an allowable range of... an inter-layer jump" is not met by the applied art.

In response, Examiner respectfully disagrees. At least in paragraph, Ueki discloses determining an allowable range of an inter-layer jump (first area in layer L0 and second area in layer L1, or vice versa as described in [0099]) in terms of seek times, which, depending on required picture quality, corresponds to an allowable range of an inter-layer jump as described above.

Also, on page 17, Applicant states:

"Applicants also traverse the position for which Official Notice was taken in the Office

Action as to modifying Okada and Ueki "to include all kinds of overhead time that involve in the

jump to guarantee that the buffer in Okada et al. would not underflow in the reproduction of the

data stream in Okada et al. and Ueki would not be interrupted".3

Applicants first require that prior art be recited for such a proposition for which Official

Notice was taken.

Applicants also note there is no evidence whatsoever in the record that "all kinds of

overhead time" would be even relevant in Okada and Ueki, particularly as in the basis for the

outstanding rejection Ueki teaches away from the claimed features."

In response, Examiner respectfully submits that supports for the Official Notice's

proposition can be found in Ueki reference at least in paragraph [0130], [0132], and

[0133].

The claims are therefore rejected as presented below.

Claim Objections

Claims 25 and 30 are objected to because of the following informalities:

Claims 25 and 30 recite the formula of

$$S_{EXTENT}[byte] \geq \frac{T_{JUMP}[ms]xR_{UD}[bps]}{1000x8} x \frac{TS\_recording\_rate[bps]x192}{R_{UD}[bps]x188 - TS\_recording\_rate[bps]x192}$$, which is

believed to be

$$S_{EXTENT}[byte] \geq \frac{T_{JUMP}[ms]xR_{UD}[bps]}{1000x8} x \frac{TS\_recording\_rate[bps]x188}{R_{UD}[bps]x188 - TS\_recording\_rate[bps]x192}$$

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2, 8-9, 15-16, and 20 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-4, 6, and 8-9 of copending Application No. 11/093066 in view of Ueki (US 2004/0105351).

Regarding claim 1 of this application, claims 1 and 3 of Application No. 11/093066 recite, "a data processing method of determining an arrangement of, with regard to an information recording medium, record data including an image data clip containing image data and an audio data clip containing audio data to be applied to a browsable slide show performing an audio reproduction processing in parallel with a consecutive reproduction of a still image, said data processing method comprising: an

allowable jump range determination step of determining an allowable jump range in a

reproduction processing for said information recording medium; a required jump time

calculation step of calculating a time required for a jump on the basis of the allowable

jump range determined in said allowable jump range determination step; and a buffer

size determination step of determining a size of an image data buffer containing the

image data read from the information recording medium and a size of an audio data

buffer containing the audio data, on the basis of the required jump time calculated in

said required jump time calculation step and a data arrangement determination step of

determining a data arrangement so as to set the image data clip and the audio data clip

to be stored in said information recording medium, within the allowable jump range

calculated in said allowable jump range determining step".

However, claims 1 and 3 of Application No. 11/093066 do not recite the allowable

range of inter-layer jumps being no more than 40,000 sectors.

Ueki discloses a data processing method for determining record data allocation

on an information recording medium having a plurality of recording layers (abstract;

[0021]); an allowable jump range determining step of determining an allowable range of

an inter-layer jump ([0129]; Fig. 11 - *allowable jump range corresponds to the range that

yields the seeking time less than or equal to the time it takes to process all data in the

buffer*); a required jump time calculating step of calculating a required time for the inter-

layer jump ([0129]; Fig. 11 - *the required jump time is the time it takes to start refilling

the buffer before the seeking time*), and the allowable range of the inter-layer jump

being no more than 40,000 sectors (*[0094]; [0099]-[0100]; [0102]; Fig. 9 – wherein Ueki*

discloses, depending on picture quality, required data rates comprise 2 Mbps, 4 Mbps,

or 8 Mbps – among these rates, 2 Mbps allows largest allowable jump range – with 0.7

seconds of allowable inter-layer seek time, the jump range for 2 Mbps data rate requires

1.4 Mb, which is less than 0.2 MB, which is less than 205KB, which is less than 103

sectors).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the teachings of Ueki into the method recited by claims 1

and 3 of Application No. 11/093066 in order to be able to use multi-layer recording

media for the reasons of compactness and large capacity and also to guarantee

continuous reproduction of data on multi-layer recording media.

Regarding claim 2 of this application, claim 4 of Application No. 11/093066

recites, "said required jump time calculation step is a step of calculating, as to an

identical intra- layer jump, a sum of a seek time of a pickup and an overhead time

involved in a processing for a read data unit block of the information recording medium,

and of calculating, as to an inter-layer jump, a sum of the seek time of the pickup, a

pickup adjustment time involved in an inter-layer seek, and an overhead time involved in

a processing for a read data unit block of said information recording medium."

Claim 8 is rejected for the same reason as discussed in claim 1 above in view of

claims 6 and 8 of Application No. 11/093066.

Claim 9 is rejected for the same reason as discussed in claim 2 above in view of

claims 6, 8 and 9 of Application No. 11/093066.

Claim 15 is rejected for the same reason as discussed in claim 1 above.

Claim 16 is rejected for the same reason as discussed in claim 2 above.

Claim 20 is rejected for the same reason as discussed in claim 1 above.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 21-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 21 recite the limitation "the decoding unit". There is insufficient antecedent basis for this limitation in the claim.

Claims 2-7 and 22-25 are rejected because they depend either directly or indirectly on claims 1 and 21 above.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

.... signal claims are ineligible for patent protection because they do not fall within any of the four statutory
classes of Sec. 101.

Claims 20 and 31 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter as follows.

Claims 20 and 31 recite a "computer-readable medium," which as evidenced

from the disclosure of the specification, comprises a communication medium (see at

least paragraphs [0043] and [0267]), which is understood by one of ordinary skill in the

art as signal, carrier wave, etc ..., with descriptive material. While "functional descriptive

material" may be claimed as a statutory product (i.e., a "manufacture") when embodied

on a tangible computer readable medium, a signal or carrier wave, etc ... embodying

that same functional descriptive material is neither a process nor a product (i.e., a

tangible "thing") and therefore does not fall within one of the four statutory classes of

Sec. 101. Rather, "signal" or "carrier wave" is a form of energy, in the absence of any

physical structure or tangible material.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Okada et al. (US Patent 6,122,436 – hereinafter Okada) and Ueki (US

2004/0105351).

Regarding claim 1, Okada et al. disclose a data processing method for

determining record data allocation on an information recording medium having a

recording layer *(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42)*, the method

comprising: an allowable jump range determining step of determining, in the decoding

unit, an allowable range of an intra-layer jump performed in a playback processing of

said information recording medium *(Fig. 2a; Fig. 2b; column 20, line 66 – column 21,*

line 42 - allowable jump range corresponds to the range that yields the seeking time

less than or equal to the time it takes to process all data in the buffer); a required jump

time calculating step of calculating, in the decoding unit, a required time for the intra-

layer jump on the basis of allowable jump range information determined in said

allowable jump range determining step *(Fig. 2a; Fig. 2b; column 20, line 66 – column*

21, line 42 – the required jump time is the time it takes to start refilling the buffer before

the seeking time from t2 to t3 in Fig. 2b); and a consecutive data allocation size

determining step of determining, in the decoding unit, an allowable minimum

consecutive data size of data to be stored in the information recording medium on the

basis of the required jump time calculated in said required jump time calculating step

(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42). Okada also discloses data

are organized into ECC blocks, each of which comprises 16 sectors *(Fig. 1; column 20,*

lines 55-65).

However, Okada does not disclose the recording medium having a plurality of recording layers; an allowable jump range determining step of determining an allowable range of an inter-layer jump; a required jump time calculating step of calculating a required time for the inter-layer jump, and the allowable range of the inter-layer jump being no more than 40,000 sectors.

Ueki discloses a data processing method for determining record data allocation on an information recording medium having a plurality of recording layers (abstract; [0021]); an allowable jump range determining step of determining an allowable range of an inter-layer jump ([0129]; Fig. 11 - *allowable jump range corresponds to the range that yields the seeking time less than or equal to the time it takes to process all data in the buffer*); a required jump time calculating step of calculating a required time for the inter-layer jump ([0129]; Fig. 11 - *the required jump time is the time it takes to start refilling the buffer before the seeking time*), and the allowable range of the inter-layer jump being no more than 40,000 sectors *([0094]; [0099]-[0100]; [0102]; Fig. 9 – wherein Ueki discloses, depending on picture quality, required data rates comprise 2 Mbps, 4 Mbps, or 8 Mbps – among these rates, 2 Mbps allows largest allowable jump range – with 0.7 seconds of allowable inter-layer seek time, the jump range for 2 Mbps data rate requires 1.4 Mb, which is less than 0.2 MB, which is less than 205KB, which is less than 103 sectors).*

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Ueki into the method disclosed by Okada in order to be able to use multi-layer recording media for the reasons of

compactness and large capacity and also to guarantee continuous reproduction of data on multi-layer recording media.

Regarding claim 2, see the teachings of Okada and Ueki as discussed in claim 1 above. However, Okada and Ueki do not explicitly disclose said required jump time calculation step is a step of calculating: as to an intra-layer jump, a sum of a seek time of a pickup and an overhead time involved in a processing for a read data unit block of the information recording medium, and as to an inter-layer jump, a sum of the seek time of the pickup, a pickup adjustment time involved in an inter-layer seek, and an overhead time involved in a processing for a read data unit block of said information recording medium.

Official Notice is taken that steps of calculating, as to an identical intra- layer jump, a sum of a seek time of a pickup and an overhead time involved in a processing for a read data unit block of an information recording medium, and of calculating, as to an inter-layer jump, a sum of the seek time of the pickup, a pickup adjustment time involved in an inter-layer seek in case of a dual-layer recording medium, and an overhead time involved in a processing for a read data unit block of the information recording medium are well known in the art.

One of ordinary skill in the art would have recognized that the seeking time disclosed by Okada et al. and Ueki should be modified to include all kinds of overhead time that involve in the jump to guarantee that the buffer in Okada et al. would not underflow and the reproduction of the data stream in Okada et al. and Ueki would not be interrupted.

Regarding claim 3, Okada also discloses said consecutive data allocation size determining step is a step including an allowable minimum playback time determining step of determining an allowable minimum playback time as a playback time corresponding to the allowable minimum consecutive data size of the data to be stored in the information recording medium, and determining the allowable minimum consecutive data size of the data to be stored in the information recording medium on the basis of said allowable minimum playback time *(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42).*

Regarding claim 4, Okada also discloses said allowable minimum playback time determining step is a step of calculating the allowable minimum playback time [t] on the basis of a jump time [TJUMP], a data read out rate [Rud] from a disc in a drive and a data recording rate [RTS] in accordance with the following equation: $t = T_{JUMP} \times R_{ud}/(R_{ud}-R_{TS})$ (Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42 – *let's t be the minimum playback time. This minimum playback time is the time needed to playback a minimum amount of data recorded continuously [a1, a2]. Let's A be this minimum amount. We have t = A/RTS. Also the time needed to read out this minimum amount is $t_r = A/V_a$. According to Fig. 2b, we have $t_r (V_a – V_b) = Tjump \times V_b$ or A (Va-Vb) = Tjump x Vbx Va or t x RTS (Va-Vb) = Tjump x VbxVa or t = Tjump x Va/(RTS(Va – Vb)/Vb) or t = Tjump Va /(RTSx Va/Vb – RTS). In order to playback the data correctly, the recording frame rate and the playback frame rate must be the same or RTS = Vb. Thus, Okada et al. disclose t – Tjump x Va/(Va-RTS). Since Va is the data read out rate, which corresponds to Rud, Okada et al. also disclose t = TJUMP x Rud/(Rud-RTS); and said*

consecutive data allocation size determining step is a step of determining the allowable

minimum consecutive data size of the data to be stored in the information recording

medium on the basis of the allowable minimum playback time [t] calculated by said

equation in accordance with the following equation: Usize = t × RTS (Fig. 2a; Fig. 2b;

column 20, line 66 – column 21, line 42).

Regarding claim 5, Okada also discloses a data setting processing step of

identifying jump origin data and jump destination data that can be generated in the

playback processing of the stored data in the information recording medium and setting

a distance between the jump origin data and the jump destination data within the

allowable jump range determined in said allowable jump range determining step *(Fig.*

2a; Fig. 2b; column 20, line 66 – column 21, line 42).

Regarding claim 6, Okada also discloses said data setting processing step

carries out a processing of setting the distance between the jump origin data and the

jump destination data within said allowable jump range by an interleave processing of

clip data set as a data unit of storage target data on the information recording medium

(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42 – audio data and still picture

data are interleaved).

Regarding claim 7, Okada also discloses a data recording step of performing

data recording on the information recording medium in a data unit larger than or equal

to the consecutive data allocation size determined in said consecutive data allocation

size determining step *(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42 – the*

amount of data must be at least or equal to a predetermined amount).

Claim 8 is rejected for the same reason as discussed in claim 1 above.

Claim 9 is rejected for the same reason as discussed in claim 2 above.

Claim 10 is rejected for the same reason as discussed in claim 3 above.

Claim 11 is rejected for the same reason as discussed in claim 4 above.

Claim 12 is rejected for the same reason as discussed in claim 5 above.

Claim 13 is rejected for the same reason as discussed in claim 6 above.

Claim 14 is rejected for the same reason as discussed in claim 7 above.

Claim 15 is rejected for the same reason as discussed in claim 1 above.

Claim 16 is rejected for the same reason as discussed in claim 2 above.

Claim 17 is rejected for the same reason as discussed in claim 3 above.

Claim 18 is rejected for the same reason as discussed in claim 5 above.

Claim 19 is rejected for the same reason as discussed in claim 6 above.

Claim 20 is rejected for the same reason as discussed in claim 1 above.

Regarding claim 21, Okada discloses a data processing method for determining record data allocation on an information recording medium, said method comprising: a data size determining step of determining, in the decoding unit, a data size as a minimum size of data to be stored in the information recording medium on the basis of allowable jump range information determined as an allowable range of a jump processing in a playback processing of said information recording medium *(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42 – data size must be at least equal or greater than a predetermined amount)*; and a data allocation determining step of determining, in the decoding unit, a data recording configuration in which a data block having said data

size is so allocated as to be playable in the jump processing within said allowable jump

range *(Fig. 2a; Fig. 2b; column 20, line 66 – column 21, line 42)*. Okada also discloses

data are organized into ECC blocks, each of which comprises 16 sectors *(Fig. 1;*

column 20, lines 55-65).

However Okada does not explicitly disclose the allowable range of the jump

comprises at least an inter-layer jump and the allowable range of the inter-layer jump

being no more than 40,000 sectors.

Ueki discloses the allowable range of the jump comprises at least an inter-layer

jump and the allowable range of the inter-layer jump being no more than 40,000 sectors

([0094]; [0099]-[0100]; [0102]; Fig. 9 – wherein Ueki discloses, depending on picture

quality, required data rates comprise 2 Mbps, 4 Mbps, or 8 Mbps – among these rates,

2 Mbps allows largest allowable jump range – with 0.7 seconds of allowable inter-layer

seek time, the jump range for 2 Mbps data rate requires 1.4 Mb, which is less than 0.2

MB, which is less than 205KB, which is less than 103 sectors).

One of ordinary skill in the art at the time the invention was made would have

been motivated to incorporate the teachings of Ueki into the data processing method

disclosed by Okada in order to implement continuous reproduction of data recorded on

multi-player recording media as well.

Regarding claim 22, Okada and Ueki also disclose said data size determining

step is a step of determining a data size as a minimum size of data to be stored in the

information recording medium on the basis of the allowable jump range information of

an intra-layer jump and an inter-layer jump *(Okada et al.: Fig. 2a; Fig. 2b; column 20,
line 66 – column 21, line 42. Ueki: abstract, [0021]; [0129]; Fig. 11).*

Regarding claim 23, Okada also discloses said data size determining step is a

step of determining a data size on the basis of information in which a data recording

rate [RTS] is made corresponding to the allowable minimum data size of the data to be

stored in the information recording medium *(Okada et al.: Fig. 2a; Fig. 2b; column 20,

line 66 – column 21, line 42 – also see the discussion of claim 4 above).* Although

Okada et al. do not explicitly disclose a table in which a data recording rate [RTS] is

made corresponding to the allowable minimum data size of the data. It would be

obvious to use a table to record such information in order to eliminate constant

calculations of values of recording rates.

Regarding claim 24, Okada also discloses said data size determining step is a

step of determining a data size on the basis of a relational expression between a data

recording rate [RTS] and the allowable minimum data size of the data to be stored in the

information recording medium (Okada et al.: Fig. 2a; Fig. 2b; column 20, line 66 –

column 21, line 42 – *see also the discussion of claim 4 above).*

Regarding claim 25, Okada also discloses said relational expression is an

expression shown by the following equation: TS_ recording_ rate[bps] x 192

$$S_{EXTENT}[byte] \geq \frac{T_{JUMP}[ms] x R_{UD}[bps]}{1000 x 8} x \frac{TS\_recording\_rate[bps] x 188}{R_{UD}[bps] x 188 - TS\_recording\_rate[bps] x 192},$$

setting that an allowable minimum data size of the data to be stored in the information

recording medium is S_{EXTENT}, a total jump time is T_{JUMP}, a data read out rate from a disc

in a drive is R_{ud}, and a data recording rate [RTS] is $TS_{recording\_rate}$ (Okada et al.: Fig. 2a;

Fig. 2b; column 20, line 66 – column 21, line 42 – *from the discussion of claim 4 above,*

we have

$$S_{EXTENT}[byte] \geq \frac{T_{JUMP}[s] x R_{UD}[byte\,per\,\sec ond] x R_{TS}[byte\,per\,\sec ond]}{R_{UD}[byte\,per\,\sec ond] - R_{TS}[byte\,per\,\sec ond]}$$

$$S_{EXTENT}[byte] \geq \frac{T_{JUMP}[ms] x R_{UD}[bps]}{1000x8} x \frac{R_{TS}[bps]}{R_{UD}[bps] - R_{TS}[bps]}. \; Since \; R_{TS} = TS\_recording\_rate \; x \frac{192}{188} \; as$$

prescribed by Blu-ray disc standards – see current application [0123] and a fact that it is

well known that a packet includes a 4-byte header and 188 application data – see Yoo

et al., we have

$$S_{EXTENT}[byte] \geq \frac{T_{JUMP}[ms] x R_{UD}[bps]}{1000x8} x \frac{TS\_recording\_rate[bps] x188}{R_{UD}[bps] x188 - TS\_recording\_rate[bps] x192})$$

Claim 26 is rejected for the same reason as discussed in claim 21 above.

Claim 27 is rejected for the same reason as discussed in claim 22 above.

Claim 28 is rejected for the same reason as discussed in claim 23 above.

Claim 29 is rejected for the same reason as discussed in claim 24 above.

Claim 30 is rejected for the same reason as discussed in claim 25 above.

Claims 31 is rejected for the same reason as discussed in claim 21 above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621